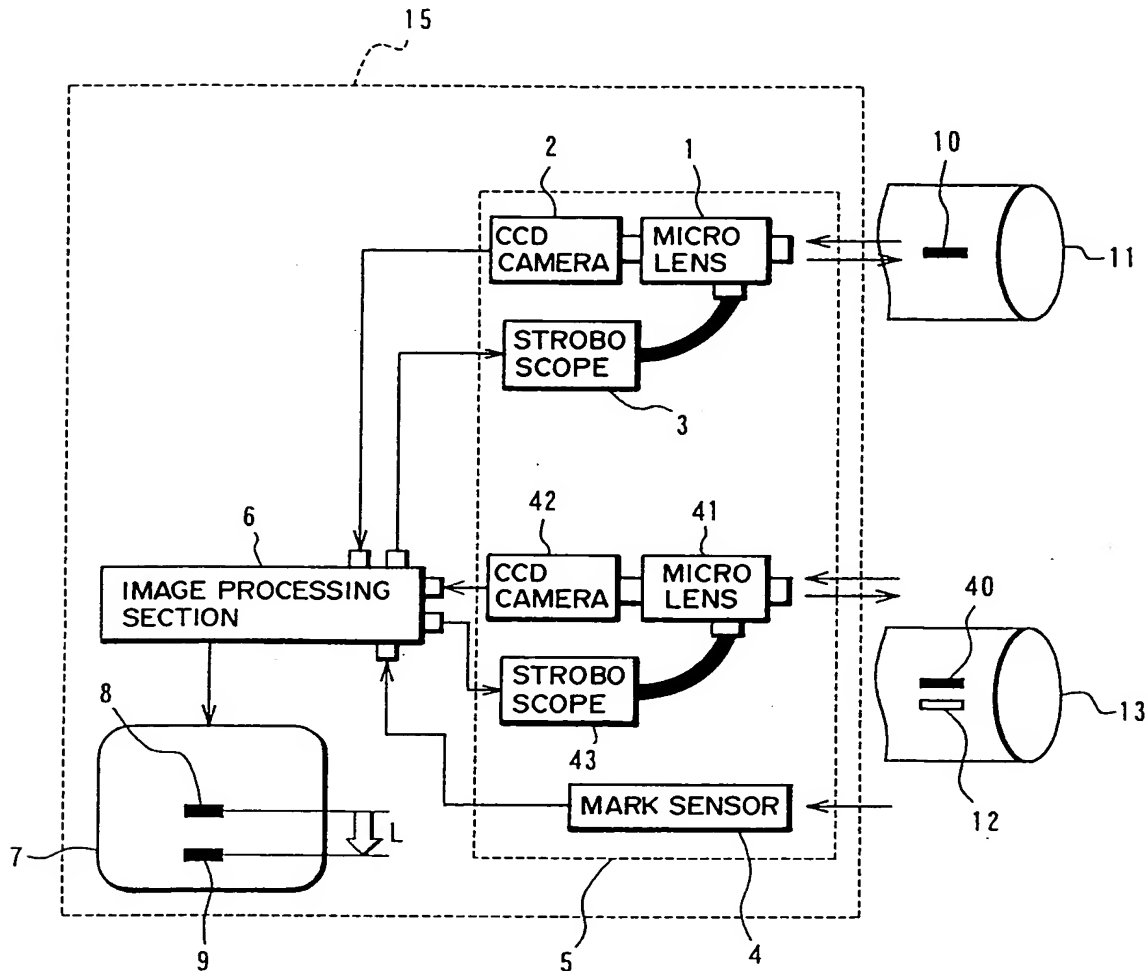




FIG. 2

BLOCK DIAGRAM OF A ROTATIONAL PHASE DIFFERENCE DETECTING SYSTEM  
OF A SECOND EMBODIMENT OF THE PRESENT INVENTION



5 : MEASURING SECTION

7 : DISPLAY SECTION

8 : REFERENCE POSITION FOR AN IMAGE PROCESSING MARK

9 : DETECTED POSITION OF AN IMAGE PROCESSING MARK

10 : IMAGE PROCESSING MARK

11, 13 : PRINTING ROLL

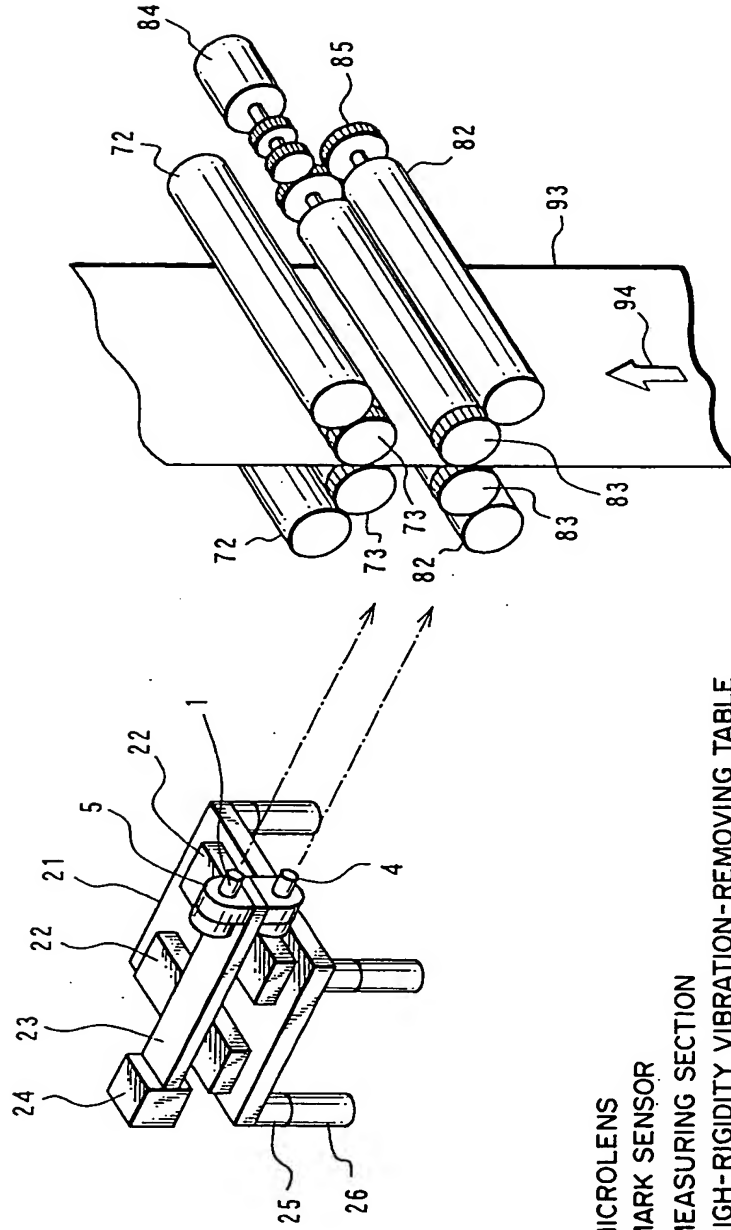
12 : REFERENCE MARK

15 : ROTATIONAL PHASE DIFFERENCE DETECTING SYSTEM

40 : IMAGE PROCESSING MARK

FIG. 3

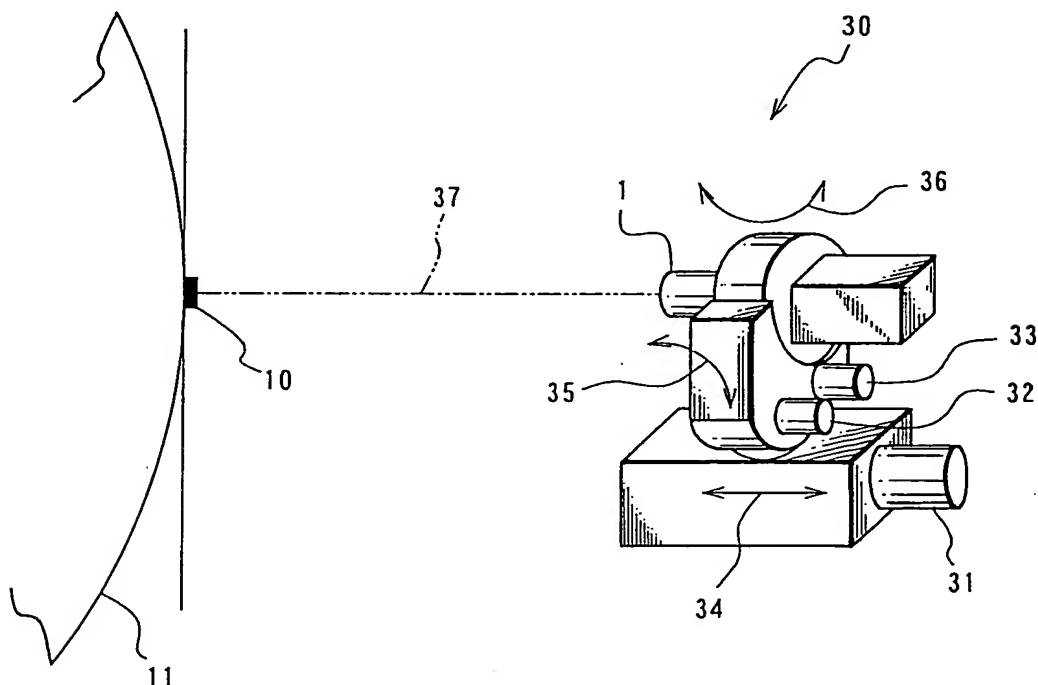
CONSTRUCTION DIAGRAM OF THE MEASURING SECTION IN THE EMBODIMENT OF THE PRESENT INVENTION



- 1 : MICROLENS
- 4 : MARK SENSOR
- 5 : MEASURING SECTION
- 21 : HIGH-RIGIDITY VIBRATION-REMOVING TABLE
- 23 : MOUNTING ARM
- 24 : COUNTER WEIGHT
- 25 : FINE VIBRATION-REMOVING SECTION
- 26 : COLUMN
- 40 : PRINTING MACHINE
- 72, 82 : PLATE CYLINDER ROLL
- 73, 83 : PRINTING ROLL
- 84 : ROLL DRIVE MOTOR
- 85 : DRIVING GEAR

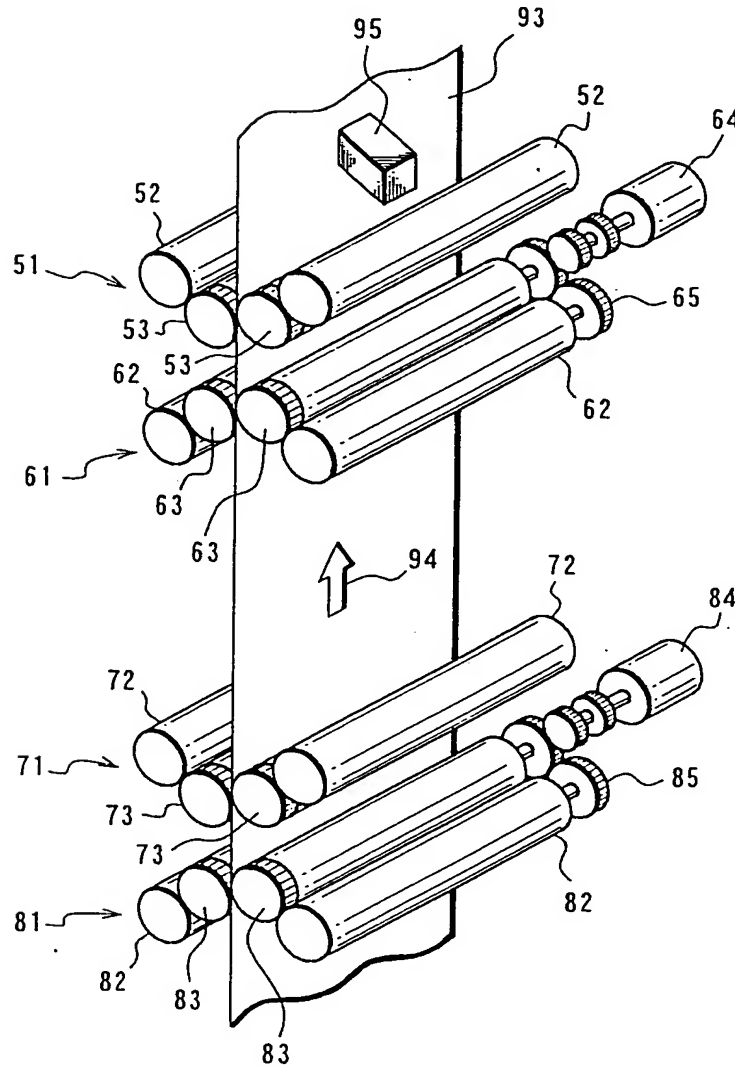
# FIG. 4

CONSTRUCTION DIAGRAM OF THE FINE-ADJUSTMENT ACTUATOR  
IN THE EMBODIMENT OF THE PRESENT INVENTION



- 1 : MICROLENS
- 10 : IMAGE PROCSSING MARK
- 11 : PRINTING ROLL
- 30 : FINE-ADJUSTMENT ACTUATOR
- 31, 32, 33 : MOTOR
- 37 : OPTICAL AXIS

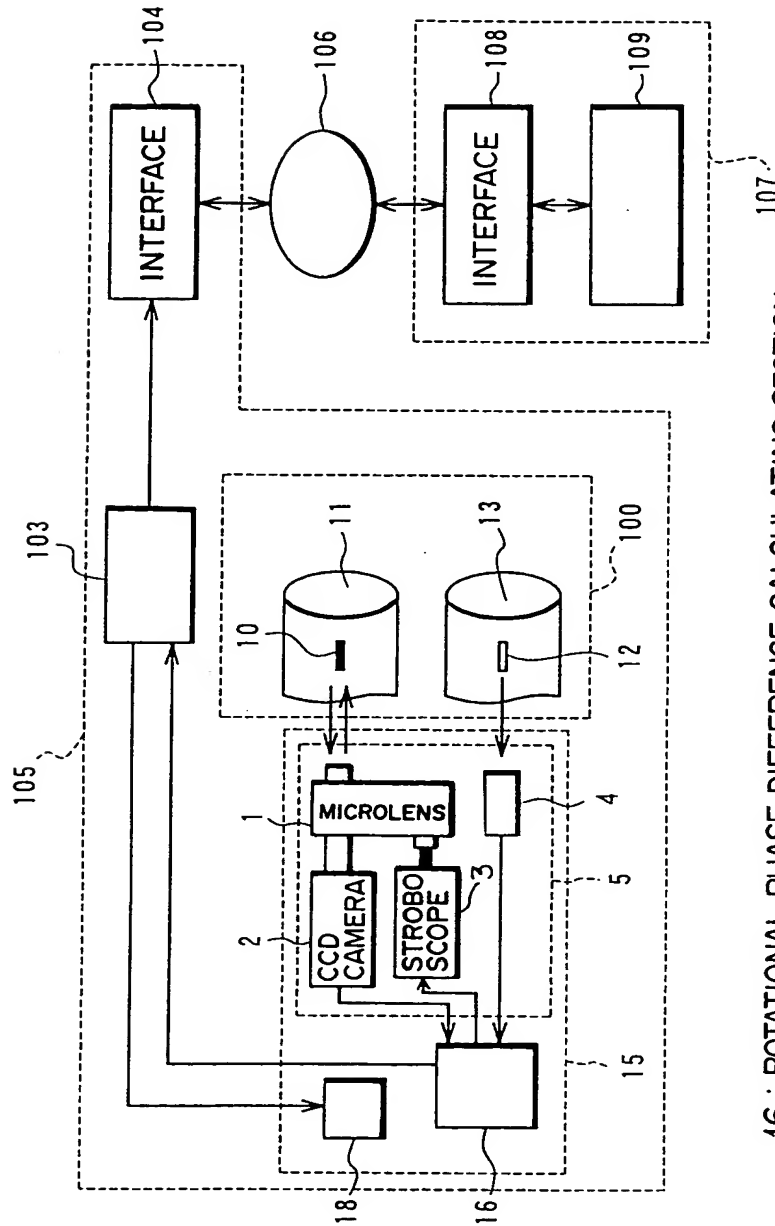
FIG. 5



- 51 : BLACK PRINTING SECTION  
 61 : YELLOW PRINTING SECTION  
 71 : RED PRINTING SECTION  
 81 : BLUE PRINTING SECTION  
 52, 62, 72, 82 : PLATE CYLINDER ROLL  
 53, 63, 73, 83 : PRINTING ROLL  
 64, 84 : ROLL DRIVE MOTOR  
 65, 85 : DRIVING GEAR  
 93 : PRINTING PAPER  
 95 : CAMERA



**FIG. 7**



- 16 : ROTATIONAL PHASE DIFFERENCE CALCULATING SECTION  
18 : DISPLAY SECTION  
103 : M/C OPERATION CONTROL PANEL  
105 : FACTORY-SIDE SYSTEM  
106 : TRANSFER MEDIUM  
107 : REMOT-SIDE SYSTEM  
109 : ROTATIONAL PHASE DIFFERENCE DECIDING SECTION

- 18 : DISPLAY SECTION

- 103 : M/C OPERATION CONTROL PANEL

- 105 : FACTORY-SIDE SYSTEM

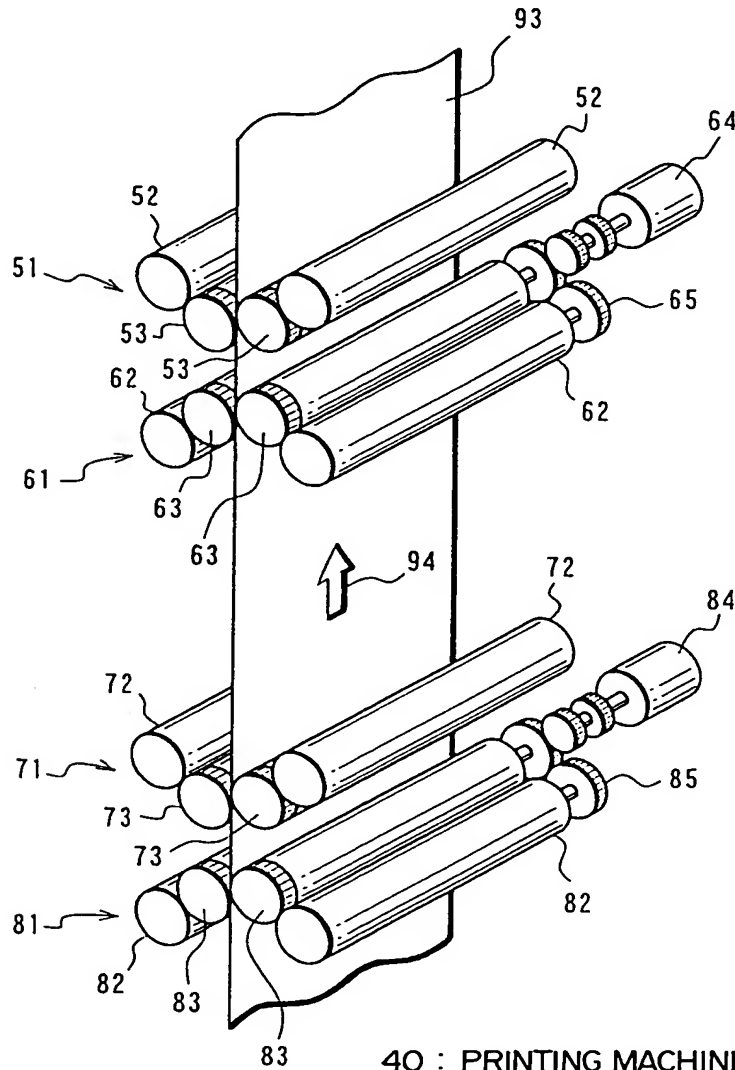
- 106 : TRANSFER MEDIUM

- 107 : REMOT-SIDE SYSTEM

- 109 : ROTATIONAL PHASE DIFFERENCE DECIDING SECTION

## FIG. 8

## OUTLINE DIAGRAM OF AN OFFSET ROTARY PRINTING MACHINE



40 : PRINTING MACHINE

51 : BLACK PRINTING SECTION

52, 62, 72, 82 : PLATE CYLINDER ROLL

53, 63, 73, 83 : PRINTING ROLL

61 : YELLOW PRINTING SECTION

64, 84 : ROLL DRIVE MOTOR

65, 85 : DRIVING GEAR

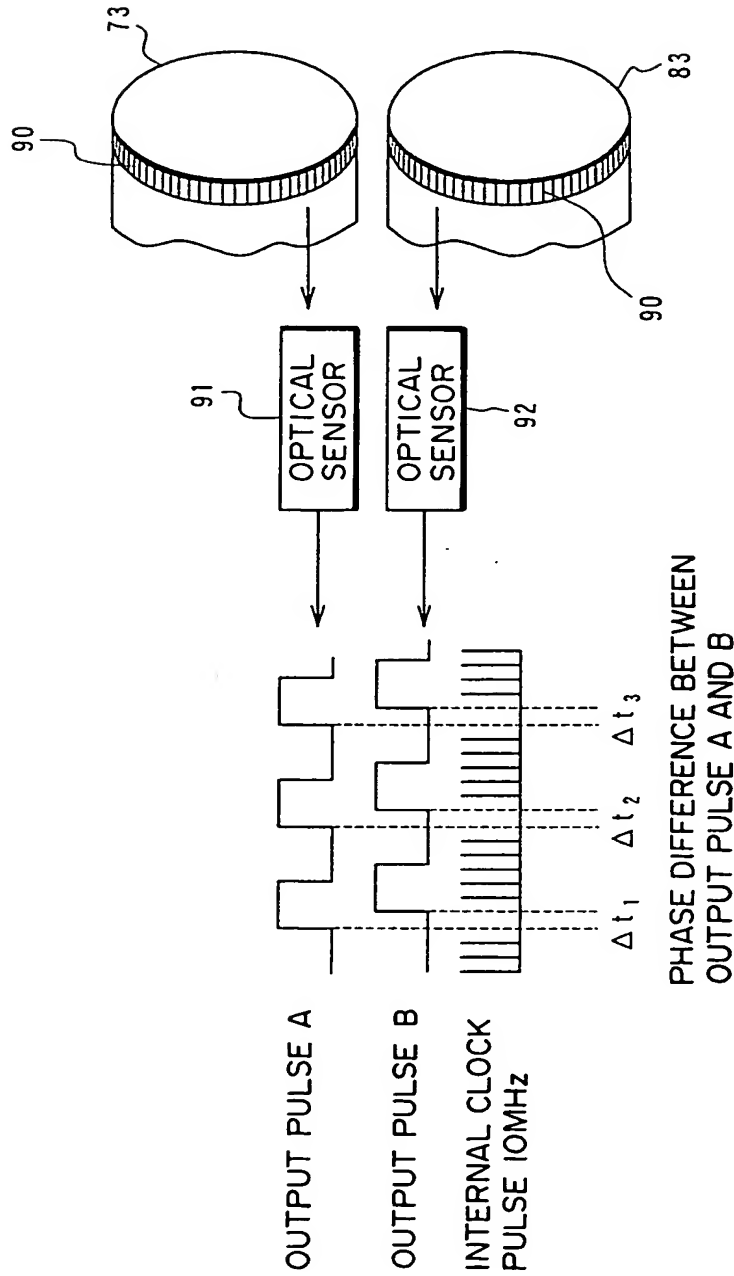
71 : RED PRINTING SECTION

81 : BLUE PRINTING SECTION



FIG. 9

EXPLANATORY DIAGRAM OF A CONVENTIONAL  
PHASE DIFFERENCE DETECTING METHOD



73, 83 : PRINTING ROLL  
90 : BLACK-AND-WHITE PATTERN